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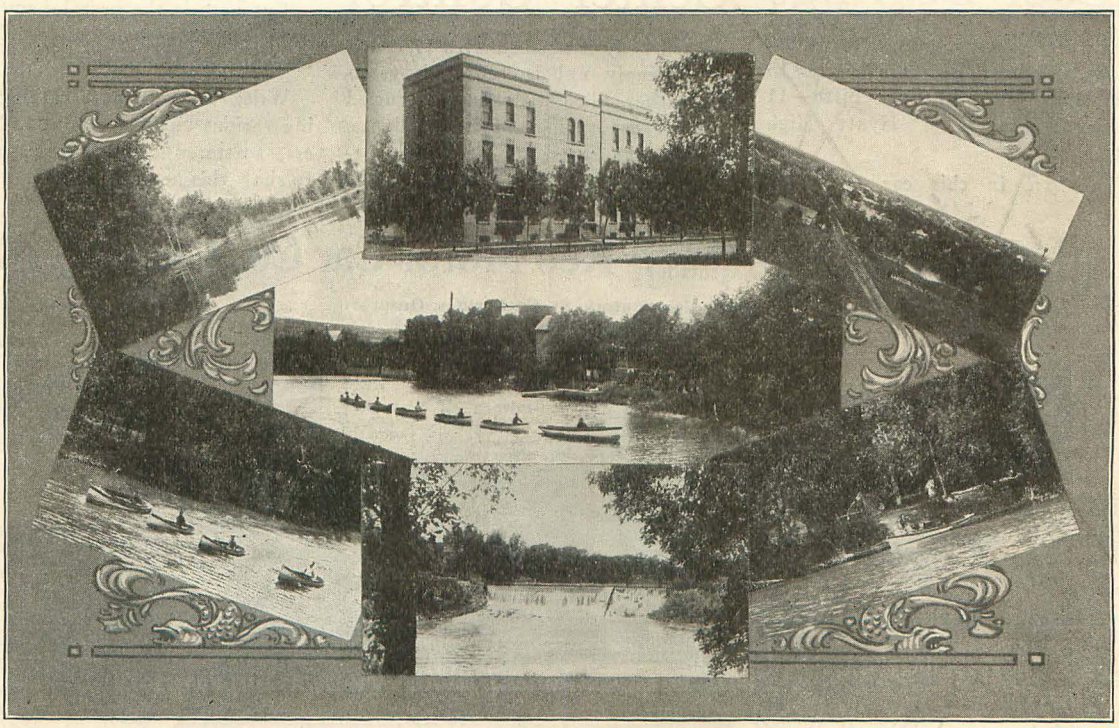
THE NORTH DAKOTA FARMER

"THE NORTH DAKOTA FARMER FOR NORTH DAKOTA FARMERS"

Vol. 14 No. 4 Lisbon, North Dakota, October 15, 1912 50 Cents A Year



Picturesque Scenery About Lisbon and Her Hostelry, The Bradford.

978.4
N814
Graham

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My 60,000th Car

By R. E. Olds, Designer

I have just finished building 60,000 cars, after 25 years in this business.

On Octobe 1, I brought out a new series of Reo the Fifth. It shows all that those years have taught me —all those 60,000 cars. And it shows some new things I have learned within the past 12 months.

Tires 34x4

One new thing is these big, wide tires—22 per cent larger than I ever used on a car of this size before.

Tire makers say that this 22 per cent will add 65 per cent to the average tire mileage. And that will mean a very big saving during the life of this car.

These tires, compared with others, will show how I consider your after-cost in building this ideal car.

Roller Bearings

For the same reason I've abandoned ball bearings. There are 15 roller bearings in Reo the Fifth—11 of them Timken, 4 Hyatt High Duty.

There are in this car 190 drop forgings, to give lightness combined with strength.

I've made the body longer and wider, to give you ample room. My springs are made two inches wide, and of seven leaves of steel. My brake drums are 14-inch.

The steel I use is twice analyzed. My gears are tested to stand 75,000 pounds. My carburetor is doubly heated to save trouble with poor gasoline. I use a $75 magneto to avoid trouble with ignition.

Every driving part is built sufficient for 45 horsepower. That gives big margin of safety.

Each engine is tested 20 hours on blocks, and 28 hours in the chassis.

Each car is built slowly and carefully. The various parts get a thousand inspections. I limit my output to 50 cars daily, so that every part can be utterly perfect.

Center Control

Each body is finished with 17 coats. It is deeply upholstered with genuine leather, filled with the best curled hair. I use springs in the backs as well as the seats, to insure the utmost comfort.

Even the engine is nickel trimmed.

This car has my famous center control, where all the gear-shifting is done by moving this lever only three inches in each of four directions. It also has left-side drive. You will note that most of the best cars have come to that in 1913 models.

Price, $1,095

I am building this car at the smallest profit I have ever received on a car. Even smaller than last season, and I thought that the minimum.

I could cut this price easily some $200 if I wanted to skimp on the car. It would mean smaller tires, less margin of safety, less drop forgings, less roller bearings. It would mean to sacrifice the best I know about making a comfortable, safe, economical car.

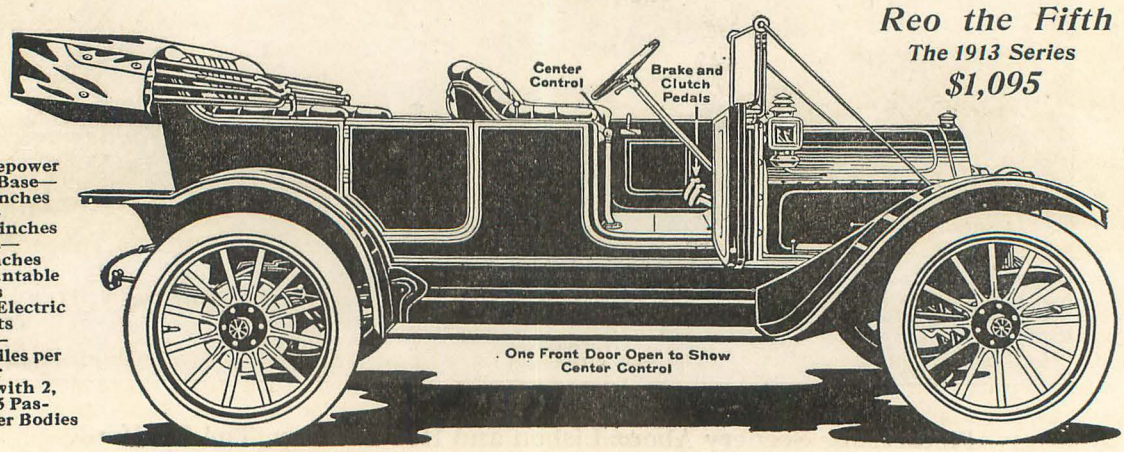
But here is the best I know. And never can any man build such a car for less than I offer this.

Write for our new catalog showing various bodies. About 1,000 dealers, scattered everywhere, are ready to show this new-series car.

R. M. Owen & Co., General Sales Agents for Reo Motor Car Co., Lansing, Mich.

Canadian Factory, St. Catharines, Ontario

Reo the Fifth
The 1913 Series
$1,095



30-35 Horsepower
Wheel Base—112 Inches
Tires—34x4 inches
Wheels—34 Inches Demountable Rims
Three Electric Lights
Speed—45 Miles per Hour
Made with 2, and 5 Passenger Bodies

Top and windshield not included in price. We equip this car with mohair top, side curtains and slip-cover, windshield, gas tank for headlights, speedometer and self-starter—all for $100 extra.

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THE NORTH DAKOTA FARMER

Vol. 14, No. 4 LISBON N. D., OCTOBER 15, 1912 50 Cents a Year

Dry Farming Methods the Basic Solution of the Problems of Agriculture

By John T. Burns, Secretary, International Dry-Farming Congress

The problem of agriculture is not altogether a matter of crops. The commercial development of the nation depends upon its proper and prompt solution. There are the social and moral results to be considered. The father and mother of the growing boys and girls must realize that there is a duty before them in the education of the young folks into a new and higher plane of life—not away from, but upon, the farm.

Unless every acre of arable land is made to produce the maximum financial return, and that reasonably soon, the hardships brought upon the bread-winners of this continent by the rapidly increasing cost of living and consequent social unrest will force a revolution more serious and far-reaching than any recorded in the history of the century.

The one great trouble with our agricultural departments, both in Canada and the United States, is that they do not get down to the heart of the problem of irrigation—the service of water—the investigation of moisture value. Instead, they spend their time in experimenting with engineering problems. As for the hard-headed farmer, he should be taught that water is water, no matter whether we measure it thru our irrigation ditch, catch it in God-given showers or find it under a dust blanket where we have stored it by good tillage.

Business Management Tells

The best farmer is the business farmer—the man who tills his soil and handles his crop with the same careful attention to details, causes and effects that characterizes the successful man at the head of a great commercial institution or banking establishment. Farming, in the true sense, is no longer mere slavery on the farm. The farm is a business institution, and the profession of farming is as respectable as any phase of commerce—in fact, upon the farmer depends the manufacturer, jobber, merchant, banker and broker. He is the source of supply. The farmer must, like the merchant, study elements of profit and loss, eliminate causes of loss and increase profit-

Portion of 1912 Corn Festival Exhibit at Lisbon, Ransom County, N. D.

able departments and crops.

The study of dry-farming is properly a part of the work of this irrigation congress, as, while the engineering problems which you have been discussing are important, a much more important phase of the subject is an exact understanding of how to secure the maximum result from the minimum amount of water. Over irrigation is as dangerous as under irrigation; in fact, we consider it more so. The plant can use only a certain proportion of food in solution; more than that becomes detrimental. The plant thrives best when it receives only the required amount of moisture. Excessive irrigation makes the root bed too wet and too cold and retards plant development.

There is a great tendency among the older type of irrigation farmer to use all the water obtainable merely because he has a right to it. Some farmers in my home state of Colorado, I am sure, would make good rice growers.

Sappers of the Soil

There are many ways of robbing the soil, and washing out the humus until the land is devoid of plant food and has developed either acidity or alkali, that can be classed as soil robbery.

Soil can only retain a certain percentage of moisture and too much water will destroy the nitrogen, and as nitrogen is the plant food element that the western soil is most deficient in, its loss is a serious matter. If washed below the feeding ground of plant roots it is lost.

Too much water clogs the surface soil by cementing the small particles together and thus produces puddling, which all recognize as very injurious to soil; it crowds out the air and lessens the action of bacteria in making plant food; lowers the temperature of the soil and often seeps out on the land lower down and injures or even destroys it for agricultural purposes.

In the irrigation districts, especially in the north, the retarding of plant growth is costly. Instead, growth should be fostered. Water is property—a public commodity, a public necessity, and no matter how much of it a man may own, if he takes more than he has need for, he is taking that which belongs to others. Why put more water in the soil than can be used by the crop?

I predict that before many years you will have combined dry-farming with irrigation methods, and instead of considering irrigation as of first value, you will use it as an auxiliary to the natural precipitation conserved in the soil.

Revolutionary as this may seem, and altho I may stand alone at this time in this attitude, you will, I am sure, within five years, agree that I have given you the basis of a more profitable system of agricultural development in your irrigation districts.

One fact that will stand out prominently in the new science of irrigation is that the efficiency of water in the production of crops decreases after the first applications and becomes very small as the total quantity for the year is increased, and a factor that will demand your attention and force your consideration of this new theory is that evidence easily obtainable by any farmer shows that all experiments and tests during the past few years lead to the one conclusion—that the quality of crops for feeding man or beast increase almost in proportion as the amount of water used for irrigation decreases to the required minimum.

Dry-Farmed Grains Best

Dry-farmed wheats show a higher percentage of protein and milling gluten than wheats under irrigation or excessive rainfall. A large number of milling tests made in 1910 by the Russell-Miller Milling Company of Montana show an average of seven and one-quarter per cent more milling gluten in dry-farmed than irrigated wheats. The average protein content of United States wheats is 12 per cent, grown under all conditions, while in Utah in 1910 winter wheats grown under dry-farming methods tested 16.17 per cent of protein. In England in 1893, an exceedingly dry year, the wheat tested 12.99 per cent in protein as against 11.94 per cent for the wheats from the humid districts of the country.

Farmer Wants Results

What the farmer wants is results. If by tillage or dry-farming he can increase his crop value and at the same time increase the service of his water it should be a business proposition for him to study. The irrigationist depends upon having plenty of surface water for distribution when needed. The dry-farmer depends upon retaining the moisture in the soil. Why not both conserve moisture and, where you have water for irrigation, distribute it if you need it and only as you need it.

History of farming shows that unit for unit, irrigation water is not so valuable to the crop as that which falls from Heaven; but water is water, no matter how obtained, and as irrigation is the most expensive system of farming, the irrigation farmer is obliged as a business proposition, to secure the maximum amount of crop from every acre. We claim that by storing the natural precipitation in the earth for use of the plants during the growing season, we have the most efficient and economical system of moisture supply and that these factors should be considered in the additional use of irrigation water.

It was once thought that the phrase "Dry-Farming" applied to agricultural operation where irrigation was impracticable and districts where the annual gross precipitation did not exceed 20 inches. We have now learned to consider in addition altitude, latitude, soils and evaporation, and while the agricultural colleges of the various states, the farmers themselves and the dry-farming investigators, have been working carefully to fix upon the basic principles of soil treatment necessary under varying conditions, we have been ably assisted by the United States Department of Agriculture, and we are now thoroly satisfied that dry-farming is applicable as a drought-preventative or for minimizing the effects of drought in the eastern or rainbelt states and as a permanent system of agriculture in such states as Oklahoma, Kansas, Nebraska, Arkansas, Texas, California and other districts even where the rainfall record averages as high as 35 inches, because of the fact that in districts where there are long hot seasons and possibly hard drawing winds, the action of the sun and wind produces such high evaporation percentages that the net moisture retained only equals from 12 to 20 inches.

The Department of Agriculture thru its experiments with tillage and supplementary irrigation, has absolutely proved the theories of the Dry-Farming Congress and its experts that the phrase "Dry-Farming" covers the most practical system of agriculture ever conceived, in that the methods are as necessary to the irrigationist and the rainbelt farmer as to the farmer in the sub-humid district where no irrigation is possible and where crop production is not possible under the old-fashioned methods.

The Dry-Farming Congress

The Dry-Farming Congress stands for more than tillage and cropping. It holds that the farm must become a great business institution, managed on a business basis; only the crops produced that are considered profitable and marketable, crops adapted to locality, distance, transportation, soils and climate. We are endeavoring to make of every farmer a layman-scientist, to help him know his soils, his crops, his stock, his possibilities as thoroly as does the head of the great mercantile establishment every phase of the line of commerce in which he is engaged.

AGRICULTURAL OPPORTUNITIES

Information Concerning Resources, Products, and Physical Characteristics of Various States.

A Government publication that should prove of interest to all residents of the United States and particularly to those who are considering the question of leaving congested industrial centers for the purpose of engaging in agriculture pursuits is

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a bulletin entitled "Agricultural Opportunities" which is being issued for free distribution by the Division of Information of the Bureau of Immigration and Naturalization, Department of Commerce and Labor.

The bulletin is in seven separate sections as follows: The North Atlantic States; the South Atlantic States; the North Central States (Eastern Group); the North Central States (Western Group) the South Central States; the Western States (Northern Group), including the Territory of Alaska; the Western States (Southern Group), including the Territory of Hawaii.

Each State is discussed briefly under the following headings: Climate, surface, and soil; irrigation and dry farming (where they are practiced to any extent); principal crops; stock raising; prices of farms and inducements to settlers; farm expenses; general and special inducements.

At the end of each article is given the address of the State official who can furnish additional information with respect to his particular State. The bulletin itself is based on information furnished to the Division of Information by officials of the States described, supplemented by data secured from publications of the United States Bureau of the Census and the United States Reclamation Service, and from other official sources.

80 Acres of Corn in Stutsman County, North Dakota

PRICES OF AGRICULTURAL PRODUCTS, OCTOBER 1

The average prices paid to producers of the United States for articles specified, on October 1, 1912, with comparisons, according to reports made by correspondents of the Bureau of Statistics of the U. S. Department of Agriculture, are shown herewith:

	Oct. 1 1912	Sept. 1 1912	Oct. 1 1911	Oct. 1 1910	Oct. 1 1909
Corn, per bu.	$ .702	$ .776	$ .657	$ .611	$ .671
Wheat, per bu.	.834	.858	.884	. 937	.946
Oats, per bu.	.336	.350	.425	.362	.410
Barley, per bu.	.548	.535	.817	.561	.534
Rye, per bu.	.701	.708	.797	.728	.728
Buckwheat per bu.	.697	.766	.696	.713	.750
Flaxseed, per bu.	1.477	1.626	2.050	2.334	1.228
Potatoes, per bu.	.511	.650	.883	.678	.643
Hay, per ton	11.760	12.140	14.500	11.820	10.030
Cotton, per lb.	.112	.113	.102	.133	.126
Butter, per lb.	.256	.242	.238	.262	.250
Chickens	.115	.113	.109	.116	.113
Eggs, per doz.	.220	.191	.200	.224	.221
Index figure of average prices*	128.6	137.6	138.0	129.8	130.5

* Index price of above products excluding butter, eggs, and chickens; 100 repre senting average of the prices on December 1 for 43 years, 1866-1908, inclusive.

The average of farm prices of important crops (corn, wheat, oats, barley, rye, flaxseed, potatoes, tobacco, cotton, and hay, which represent about three-fourths of the value of all crops) declined 6.5% from September 1 to October 1, which compares with a decline of 2.5% in the same period last year, and an average decline of 3.1% during September of the past four years. On October 1 the average of farm prices of the above named crops was about 6.8% lower than on like date of 1911, .9% lower than in 1910, 1.5% lower than in 1909 and 1.1% higher than in 1908, on like dates.

A GOOD TIME TO PUT UP FENCING

There will be more than the usual amount of fencing put up by our readers this fall owing to the lateness of the spring season which prevented the usual improvements on many farms. The late fall days after the crops are harvested and before the ground freezes is an ideal time for work of this kind and now the question to be decided is—what kind of fence to buy.

While one wire fencing looks very much like any other, yet there is a great deal of difference in their construction. In the first place the quality of wire varies in different makes, the amount of galvanizing varies and the method of building is not exactly alike in any two makes.

These differences explain why one piece of fencing will last for years, always standing tight and trim and resist rust while others soon go down, break at the joints and prove a bad investment.

We call your attention to the advertisement of the Keystone Steel and Wire Co., of Peoria, Ill., on page 7. This company manufactures the famous quality wire used in their fencing. Some of the advantages of this fence are the double gripping, self draining Square Deal Locks, the one piece stay wires and the wavy strand wires. It will pay you to get their catalog before you buy any more fencing. If you will send for it right away they will also mail you a useful folding two-foot rule. See their advertisement.

AMERICAN ROAD CONGRESS

Pronounced impetus has been given to the proposal for the construction of a system of National highways by the enthusiasm with which good roads advocates thruout the country have welcomed the action of the American Road Congress in endorsing the Federal Aid proposition generally, as well as the recent project for the construction of a great ocean-to-ocean highway, in part following the Old Trails of the early pioneers, and to be built with funds much of which will be provided by the automobile and allied industries, general leading concerns having already agreed to contribute one-third of one per cent of their gross earnings for the next three years towards this great National road.

That the National government should continue the policy of Federal Aid in highways construction adopted by the present Congress, without waiting for object lessons in the shape of privately constructed transcontinental roads, was the opinion of the Congress, expressed in its first and most important resolution. In this it endorsed the attitude of the A. A. A., which has consistently been that before any particular route for a National Road or system of roads can be intelligently selected, there must be adopted a definite policy of appropriations and expenditures and the proper administrative machinery providing for the economical distribution of available funds. The action of the Congress of the United States in appropriating

Mention the NORTH DAKOTA FARMER

When Writing Advertisers

SEED WANTED

We are in the market for North Dakota grown TIMOTHY, BROMUS and MILLET of all varieties.

Send us samples of any high grade grass seed or seed grain you have for sale, and we will make bid on same F. O. B. your station. WRITE US TODAY.

FARGO SEED HOUSE

Fargo, - North Dakota

Wonderful Kerosene Engine Saves Money Every Minute!

A Startling Success—A Success from the Start

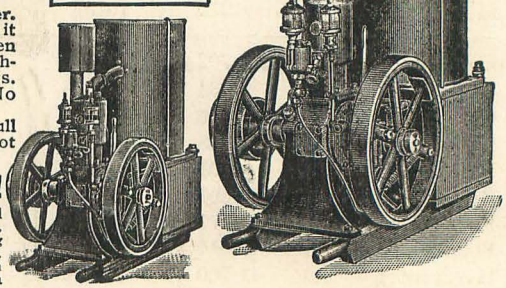
This amazingly light, powerful and durable engine runs on kerosene—**just ordinary lamp oil!** It is the only engine in the world that does it **successfully.** Kerosene costs about **half** as much as gasoline and the same quantity yields **one-third more power.**

Gasoline prices are rising. Coal oil is getting cheaper. Thus the "Detroit" solves one of the greatest problems that confront the users of engines. The "Detroit" saves money every minute. It does the work of engines weighing **four times as much.** It runs equally well on gasoline, alcohol, naphtha, benzine, turpentine, distillate, gas, etc., etc. It is the lightest engine of its horse power in the world—**and the very best—bar none.** You can get one of these wonderful engines, any size desired, on 15 Days' Free Trial, direct from our great engine works. It is all complete as shipped—ready to run when uncrated.

The Amazing "DETROIT"

Gives World's Cheapest Power

2 to 24 h. p. Every One a Winner



The "Detroit" does everything that any engine will do—**and does it better and cheaper.** It is mounted on skids, for easy handling. It pumps, it churns, it sprays, it saws, it threshes, it grinds feed and does innumerable other things. It will even light your house and barn, when attached to a dynamo. This is the supreme test of smooth-running required of any engine. Only three moving parts. Starts without cranking. Reverses like a steam engine. No cams, sprockets, gears, valves, etc., etc.

We run every engine at the factory, and ship it in full running order. Our **guarantee** means money back if not found entirely satisfactory.

GREAT SPECIAL OFFER

To the first purchaser in each locality we offer a special introductory price on the Detroit Kerosene Engine. This offer will not hold good indefinitely. Only one engine sold in a neighborhood at this price. We make this offer because the first engine creates a big sensation and brings additional orders from that locality. This is a grand opportunity. Don't miss it. See coupon.

(57)

Thousands Already Sold—Orders Pouring In!

When we startled the country by the announcement that a coal oil engine had at last been perfected, a whirlwind of sales resulted. Thousands of "Detroits" are now in use, and our manufacturing facilities are taxed to the utmost to supply them as fast as needed. They are winning a world-wide reputation for economy and high efficiency. No other engine, at any price, can compete with them successfully.

Try One 15 Days—Fire It Back if Not O. K.

We Will Refund Every Cent You Have Paid Us for the Engine

We are shipping out our engines as fast as applications are received, **on 15 days' free trial.** Your choice of sizes—2 to 24 horse power, inclusive. We assume all the risk. If for any reason you are not satisfied with the engine, simply **fire it back.** We will hand your money back that you have paid us for the engine without any "back talk." It is easy to do business with us. Our responsibility is unquestioned.

Save $40 to $200 on an Engine

We sell the entire output of our great engine works, covering eight acres, direct to the actual users, at factory prices. A clean saving of $40 to $200 cash, depending on size of engine ordered. You cannot get this engine anywhere else in the world. Read our Great Special Introductory Offer.

SEND COUPON OR POSTAL

Investigate this amazing engine immediately. Get the Detroit Engine Catalog and see how we have entirely **revolutionized** the design and construction of engines. The low cost of the engine itself, the economy in fuel, the simplicity and power of the "DETROIT" will surprise you. Sign and mail the Coupon which brings Free Catalog and Special Proposition.

DETROIT ENGINE WORKS, 385 BELLEVUE AVENUE DETROIT, MICH.

COUPON **Free Book and Introductory Offer**

DETROIT ENGINE WORKS
385 Bellevue Ave., DETROIT, MICH.

Dear Sirs: Please send Free Book and Special Introductory Offer on the Amazing "DETROIT."

Name _____

Town _____

R. F. D. _____ State _____

$500,000 for experimental road construction and appointing a Joint Committee to report upon a comprehensive plan for further Federal Aid was endorsed by the Road Congress, as well as the proposal to create a National department of Good Roads as a separate branch of the Federal government.

Of great historic and patriotic importance, was the action of the Road Congress in endorsing the resolution, for which the A. A. A. has continuously stood out, that the National memorial to Abraham Lincoln should take the form of a great highway with suitable architectural approaches and adornment, extending from Washington to the Battlefield of Gettysburg, and eventually to be continued southward to Richmond.

Equally important was the adoption of the resolution calling upon Congress for suitable provision for the construction of a first class highway leading from the city of Washington to the National Cemetery at Arlington. The deplorable condition of this road is well known to Members of Congress, and it is hoped that favorable action on this resolution will result.

NORTHWESTERN PRODUCTS EXPOSITION

No Sheaves Needed to Win Big Prize

Because of rains in North Dakota and Minnesota during the wheat harvest, the managers of the Northwestern Products Exposition, have decided not to require farmers to send sheaves of their wheat with their five bushels of threshed grain to compete for the $5,000 prize to be awarded in Minneapolis in November.

The rain made it almost impossible for farmers to secure good sheaves and in some places they could not have secured sheaves at all unless they had pulled the gra n before it was ripe. This caused the exposition people to waive the sheaf requirement.

All that is necessary now to enter the contest for the big prize is to send five bushels of threshed grain prepaid to Will A. Campbell, manager of the Exposition, Minneapolis. An application and entry blank will be sent free on request to any one desiring to enter and there will be no fee of any kind asked or received.

SPECIAL ORDER PROVIDING FOR THE IMPORTATION OF CANADIAN SHEEP FOR EXHIBITION PURPOSES AT THE INTERNATIONAL LIVE STOCK EXPOSITION, CHICAGO, ILL.

James Wilson, Sec. of Agri.

It is hereby ordered, That from this date to December 7, 1912, Canadian sheep may be imported into the United States for exhibition purposes at the International Live Stock Exposition, to be held at Chicago, Ill., from November 30 to December 7, 1912, without being subject to the thirty days quarantine, provided they pass a satisfactory inspection at the port of entry and are accompanied by an affidavit of the owner or importer and a certificate issued by a Canadian official veterinarian, as required by Regulation 42 of B. A. I. Order 180, "Regulations for the inspection and quarantine of horses, cattle, sheep, swine, and other animals imported into the United States." And provided further, That the sheep which are not sold to remain in the United States shall be returned immediately to Canada at the close of said exposition.

The Department must be notified by the owner or importer, thru the office of its veternary inspector in charge at Chicago, of any Canadian sheep which are to remain in the United States for breeding purposes, and such sheep will be maintained in quarantine at the exposition grounds under the supervision of an inspector of this Department, who shall issue a certificate before shipment to destination is allowed.

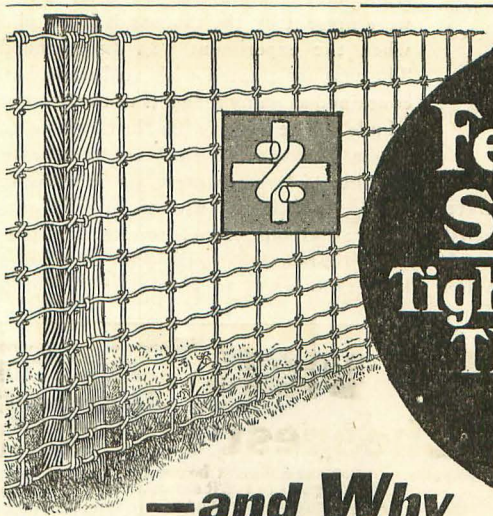
The thirty days of quarantine will be counted from the date of entry into the United States.

All Canadian sheep intended for this exposition must be shipped directly to the exposition grounds, and must not be unloaded in any public stock yards.

SUPREME COURT

Adv.

James E. Robinson is the Judicial Reform candidate for Judge of the Supreme Court. The North Dakota Bar Association, at its last meeting, advocated a few of the reforms which Mr. Robinson has been advocating for over fifteen years. The Judiciary, however, will never be reformed by the lawyers, as the majority generally hesitate to openly oppose a Judge who is up for election, and in many cases there is good reason for hesitating, because from a Judge's wrath there is no appeal.



The Fence That STANDS Tight and Trim The Whole Year Round

—and Why (15)

Every farmer knows that a fence which will stay tight and trim through summer and winter must be built to give and take. It must be made of tough, springy wire, and in such a way that in contracting and expanding it will take up as much as it gives out.

There are several reasons why

"Square Deal" Fence

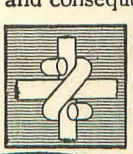
Stays Tight and Trim the Year 'Round

FIRST: Note that the strand wires are wavy. This gives the fence *elasticity*—its give and take—*keeps it tight* summer and winter.

SECOND: The Stay Wires are *one-piece* from the top wire to bottom one, forming the backbone of the fence, which stiffen and support it, absolutely preventing sagging and bagging.

THIRD. Note the *SQUARE DEAL LOCK* which double-grips the wires so tightly they cannot possibly slip. It is one of the most important parts of a wire fence.

We use the toughest, strongest wire—draw it, galvanize it, anneal it in our own mills; then weave it into Square Deal Fence and back it with our own guarantee. We know how it is made—the kind of material that's in it—and consequently stand back of it with our Square Deal Guarantee, which insures every purchaser a Square Deal and perfect satisfaction.



Write for Catalog, Prices and Free 2-Foot Folding Rule

We want you to know more about this "honor built" fence. Our catalog tells the complete story. If you will write for a copy we will send you a Four-Section 2-Foot Rule FREE. Send today before they are all gone.

THE KEYSTONE STEEL AND WIRE CO. 1015 Industrial Street PEORIA, ILLINOIS

Mr. Robinson has had many cases before the Supreme Courts of North Dakota, South Dakota, Wisconsin, Minnesota, and the United States Supreme Court. He has had over a thousand cases in the District Courts of this state, and has the enviable record of having won over ninety-five per cent of his cases.

He has for many years fearlessly and courageously advocated a change of the court rules so as to give justice to all with absolute fairness, and without sale, denial or delay, and in utter disregard to the social, financial or political affiliation of the parties.

If elected, Mr. Robinson will not assume to be the dictator of the people, but will consider himself their servant. He will insist that the Supreme Court keep up with its work, and will refuse to join in a three months vacation while many cases are pending before the court—some for years. He believes that a servant of the people, who receives a salary of Five Thousand Dollars a year ought to attend to his business.

We all realize that too often in the past our Judges have been selected by a few Corporation attorneys and then submitted to us for ratification. This system we have now outgrown.

LOSS BY FOREST FIRES

"Forest fires in the United States have caused an average annual loss of about 70 human lives, the destruction of trees worth at the very least $25,000,000, and the loss of stock, crops, buildings, and other improvements to the amount of many millions more. To these must be added enormous losses from the destruction of young tree growth, deterioration of the soil, damage to water courses and adjacent property by low water and flood, interruption of business, and depreciation of property. By inquiry into the causes and extent of such fires we are able to realize in some degree the magnitude of their losses, even tho their annual amount in dollars may not be apparent."

Such is the opening statement of Bulletin 117 of the Forest Service issued by Secretary Wilson which is devoted to forest fires, their causes, and prevention.

THE UNIT OF COST

How much do your shoes cost you?

Mental answers of $3., $4., $5., etc., will probably be made in great numbers to this question, but there is a surer way than that of finding out what your footwear costs.

An advertisement of "Ball-Band" Rubber Footwear points out that a boot costing $3 that wears three months is more expensive than a $4 boot that wears six months.

The "Ball-Band" people insist that the way to figure the cost of rubber footwear is on the cost per day's service or week's service, if you prefer.

It is a good idea, the Mishawaka Woolen Mfg. Company has given here; one that can profitably be applied to other purchases.

It is said that a great railroad president cut his operating expenses down 30% when he finally discovered his unit to figure on. The Unit was the lowest cost of hauling a ton of freight a mile.

You might apply that Unit idea of cost per day's wear to boot buying. It is conceivable that it would warrant the purchase of "Ball-Band" Boots.

Experiments With the House Fly

To determine the feasibility of preventing the maggots of the house fly from developing in cow manure and at the same time adding to its fertilizer value, tests were made recently by the North Carolina Experiment Station, by mixing 16 per cent acid phosphate with manure. Entirely negative results were secured from the standpoint of killing the maggots, as they were present by the thousands in all piles when the experiment was discontinued. The manure treated with acid phosphate contained as many maggots as the untreated pile. The results after the treatment of a pile of manure with 4 per cent water solution of formalin were also unsatisfactory. The liberal use of disinfectants, such as creolin, zenoleum, etc., applied 3 or 4 times a week to the walls and floor of box stalls serves to keep the flies out to some extent, but the observations made by the officials in charge of the test, lead to the belief that such applications are of comparatively little value. All the work conducted shows that the weekly removal of all stable manure, and that accululating in the yards or piled outside, is the only way to really prevent flies from breeding around the barns.

The work of poisoning flies in a calf barn and pig pen produced about 1,000 flies that were dead or partly overcome by formalin with 30 minutes. Little pigs at once commenced to eat the dead flies and consumed large numbers without showing any ill effects. Dead flies killed by the formalin mixture were also fed to chickens without any injury.

For cheap farm loans on the Amortizement plan write **The International Security Company of America, Grand Forks, North Dakota.**

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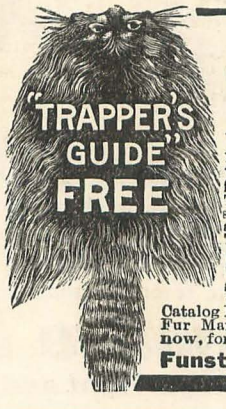
Lisbon, - - N. Dak



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Write for territory now and get ready for a big business next spring.

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RANSOM COUNTY CORN FESTIVAL

The Second Annual Corn Festival exceeded all expectations and every one who attended left with a feeling of satisfaction. The attendance was, to a certain extent, cut down by the bad condition of the roads but was by no means small.

The winners of first prizes in corn are as follows:

Northwestern Dent—Emil M. Grandlund
White Dent—E. B. Aherin
Yellow Dent—Emil M. Granlund.
Flint Corn—Jack Fleming.
Best Corn on Stalk—Andrew Larson.
Pop Corn—J. Bunch.
Sweet Corn—Frank Horn.

One of the prominent features of the festival was the exhibit of corn raised by school boys of the county, the Lisbon Commercial Club having offered a prize of $40 for the highest yield per acre. Harper Brush, 12 years old, won first prize. Eighty-nine bushels of corn were grown on Harper's acre of land, after deducting seven bushels as immature. The lad did all the work himself. He secured the use of neighbor's horses by working on the farms of the neighborhood. Harper sold this corn for one dollar a bushel, so that the proceeds of his acre amounted to $129.

Six bushels of peanuts were grown by Nathan Wheatland on his Ransom County farm. A bushel freshly dug were exhibited at the Corn Festival. The quality was fully as good as southern grown peanuts.

George Leimbacher, another Ransom county farmer, successfully cultivated an acre of tobacco which produced over forty pounds of fine quality leaves. The taste and smoking quality of the tobacco is declared excellent by experts. The leaves grew to large size and matured before the frost.

EDDY COUNTY WINS FIRST HONORS

Eddy county won first prize in the industrial show for the second time at Bismarck, for the best exhibit by any county in the state.

Richland and Barnes counties tied for second place and will divide second and third money.

Morton county got fourth place.

McLean, Hettinger and Dunn were tied for fifth place.

The exhibits this year were of higher class than last season and Eddy county had stronger competition than before.

Zimmerman Pitless Wagon Scale Extra Heavy solid steel frame; double strength steel platform beams. All bearings completely protected from mud. The strongest and most accurate weighing scale on the market; guaranteed for 10 years. For catalog and discounts address Dept. N

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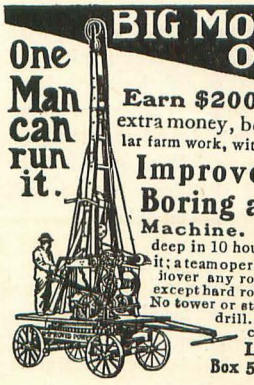

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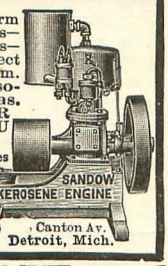

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ASSOCIATE EDITORS

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PROF. W. B. RICHARDS, Livestock.
PROF. C. B. WALDRON, Fruits, Forestry, and Insect pests.
GEO. HAUSMANN, Poultry.

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The virgin prairie road is a dream; the patched-up "made road" is a nightmare.

If you are interested in silo construction write the Experiment Station at Fargo for Bulletin No. 98.

The true "Progressive" is the man who gives his wife as many home conveniences as he himself uses in the field.

An animal with two horns and four legs is not necessarily a **cow.** There are far pleasanter ways of squandering money.

In making your choice at the coming election be sure you do not judge a party by the job hunting enthusiasts. Such people cast a suspicion upon any party new or old.

By all means vote on November 5. The state and the country need the intelligent voter. It is your duty to counteract the vote of the trickster or the man he manipulates.

Have you se'ected your seed corn for 1913? North Dakota will raise 25% more corn next year than was raised in 1912. Selected seed means more corn on fewer acres, hence greater profit with less labor.

There are two ways of getting rid of the screenings: one is to sell them in the grain market and the other is to feed them to poultry. One way lowers the grade of the marketed grain, the other pays the grocer's bill. Take your choice.

In one of the counties of North Dakota there are today fifteen silos. Next year forty more are to be erected. There is no better or surer sign of changed conditions. One can almost read across the top of every silo, "No Soil Robber Lives Here."

When you consider that for every man, woman and child in North Dakota there was raised of spring wheat alone nearly $200 worth, the wonderful resources of the state become apparent. No wonder it is considered one of the wealthiest states in the Union.

One of the lasting impressions upon the writer's mind was his grandfather's long implement shed, where were kept in good order the farm machinery used on that bare and seemingly unproductive New England farm. Such thrift in this state during the past ten years would have saved a million dollars.

The action of the Anti-suffragists reminds one of the little fable we read when children, "The Dog in the Manger." The young society woman bound up in fashions and entertainment has little desire for the franchise, and frequently is active in opposition to votes for women, but the tax paying woman should have a voice in the government and why not?

The state institutions have done a wise thing in allowing the students to go into the harvest fields to assist the farmers with their delayed fall work. Even the boys of the high schools thruout the state have been of great he'p. The compulsory school law has been a dead letter the past month and rightly so. With such aid the enormous crop of 1912 has been saved, altho fall plowing has been delayed.

At the last meeting of the Bankers' Association the "Blue Sky" law of Iowa was discussed and recommendations will be made to the next legislature for a similar law in this state. Bankers as well as farmers are fleeced by the wily swindlers. It is rather disheartening for a farmer, after the hard knocks necessary to lay by a nice nest egg, to find that he has nothing to show for his pains but a worthless piece of paper designated a "share."

Every school house should be a seed testing center for the community. If the teacher cannot conduct the test he ought to learn. In this respect the one-room school has the advantage of the consolidated. Until the conditions are favorable for the consolidated school make the single school effective. Tax yourself as heavily as the citizen of the town and demand for your children such an education as will attract them to the farm, not entice them away to the city.

Judges, both district and probate, and county superintendents in Minnesota are out of politics. Now let North Dakota go one better this winter by placing other elective county officials on a non-partisan basis. Now that no candidate is allowed to contribute toward the campaign funds, there is a better chance for taking the county superintendency out of politics. As well make a teacher declare her political preference as to require this "qualification" of the county superintendent.

We hear these days much about the dishonor of this country in declining to grant the same terms for Panama Canal privileges to foreign shipping as to her own. By the terms of the treaty we agree to grant these privileges to the "ships of all nations on terms of entire equality." While the wording "all nations" grammatically does include our own, it is as absurd to suppose that we should include our own shipping as if a farmer who owned a threshing rig and agreed "to treat all farmers alike" should decide to thresh his own grain in any way he chose regardless of any agreement as to methods. It would be equally absurd to refer the matter to those who would be prejudiced against this nation. Hereafter the merchant should be careful not to advertise, "We treat all alike."

Never before in the history of the State has there been so much interest taken in the study of elementary agriculture. Teachers are fitting themselves to teach this subject, and pupils in the seventh and eighth grades are taking up this branch in the place of many useless subjects. The writer had the privilege recently of listening to a boy in a rural school discuss methods of dry farming and rotation of crops as freely as his big brother once explained the intricacies of cube root, and with far more interest and profit. You will note that we publish each month articles that just fit the requirements of the state course of study. We wish to be helpful to the boy and girl as well as to the father and mother on the farms of the state. The North Dakota Farmer should be in every school library, and special rates are made to school boards and teachers. It is scientific and its advertising columns are clean. We call the attention of patrons and school officers to this feature of the paper.

North Dakota

Is worthy of the best farm paper. Are you helping to make it so? You cannot boost the N. D. F. to better advantage than by mentioning this paper when you write to the advertisers. We have their confidence. They have ours. Simply write at the bottom of the letter or postal, "North Dakota Farmer."

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Lisbon, North Dakota

Elementary Agriculture

THE SELECTION OF SEED CORN

Extract from Holden's Corn Culture

The importance of selecting the best ears to plant cannot be too much emphasized. The following will illustrate the great difference in results from different ears. One ear produced 55 bushels per acre, had 67 barren stalks, 244 broken stalks at time of harvest, and 62 suckers, while another ear planted by its side yielded 82 bushels per acre, had only 6 barren stalks, 130 broken stalks and but 5 suckers.

In another experiment with 102 ears planted side by side the average yield was 67 bushels per acre, the average of the five highest was 86.5 bushels, while the average yield of the five lowest was less than 40 bushels per acre. Thus it will be seen that the yield from the five best ears was more than couble that of the five poorest ears.

Some ears produce strong, vigorous stalks with heavy dark green leaves, and some slender stalks with narrow leaves of a pale color. In some rows the ears will be high on the stalk, in others low; some will be late and others early; some will grow rapidly, others much more slowly; some will be considerably affected by smut, others but little. We cannot pay too much attnetion to the selection of the best ears, discarding the low producing ears.

There are a number of things which the person selecting his seed to plant, or a judge at a corn contest, should take into consideration, and which will help him to decide which ears, or which sample of corn, will give the best results when used for consideration, and which will help him to decide which ears, or which sample of corn, will give the best results when used for seed.

Maturity is one of the most important things to be considered. There has been a tendency in the northern states to grow late maturing varieties, and to select too large ears, or ears with too deep grains, which tends toward lateness. As a consequence such corn is improperly matured, chaffy, and grades low in the market. A load of immature, chaffy corn loose on the cob, light and starchy, is often worth scarcely half as much in the feeding lot as a load of well matured corn. To this loss we must add the difficulty of keeping immature corn.

It generally molds more or less, and almost always, during March and April, when the corn thaws out, the heart or chit of the kernels, which is the most valuable portion of the grain, turns black, becomes strong and unpalatable and the feeding value is greatly reduced.

What we need is not large, late maturing kinds of corn, but a better stand, with every stalk bearing a medium sized, well matured solid ear of corn.

One small ear of corn weighing 10½ ounces to each of the 3,556 hills per acre would make 33 bushels per acre. What we need now is another ear of corn to each hill.

The indications of immaturity are chaffiness, looseness on the cob, sappiness, dull and starchy appearance of kernels, the chaffy portion of the cob adhering to the kernels, when removed from the cob, or the tip cap of the kernels breaking off leaving the germ exposed, shriveled or wrinkled appearance of the tips of the kernels, the doughy appearance or cheese color of the germ or heart of the kernel.

Probably the next most important thing to take into consideration is the trueness to type, or breed characteristics. The ears to be selected for seed, or for the exhibit should be uniform in size, shape and color, and should be free from mixture. The kernels of the different ears should also be uniform as to color, size and shape, maturity and other characteristics.

The varieties which become mixed generally have different types or characteristics of kernels. There will be a tendency for some of the ears to have broad, shallow or thick kernels, while others will have narrow, deep or thin kernels. This lack of uniformity in size and shape of kernels makes it impossible to secure an even dropping of the seed by the planter, which means a poor stand and a reduced yield.

In connection with the ears of corn and the kernels, there are many things which indicate strength or the lack of it. Ears with compressed butts, very small pointed shank attachments, or with small pointed tips partially covered with small, yellow, flinty kernels, ears with a dull and starchy appearance, or ears with kernels having small germs, or weak pointed tips are generally weak, i. e., produce weak plants which will not endure unfavorable conditions such as cold, wet ground in spring, or dry weather later in the season, or resist the attack of insects, etc.:

A large germ or heart in the kernels of the ear indicate not only strength and vigor, but also high feeding value.

There has been so great a demand for some information regarding the different things to be taken into consideration in the selecting of seed corn and in selecting of samples for corn exhibits, at fairs, institutes, corn contests, etc , that the score card is herewith given.

I. General Appearance
(Productiveness)
20 Points

1. Size and Shape of Ear. With the proportion of corn to cob being the same, the larger the ear, the larger the yield, providing the same number of ears are raised on an acre. The ability to mature limits the size. Well shaped ears show strength, vigor, breediness.

2. Constitution. Strong, vigorous ear —corn that will do something in spite of cold ground and unfavorable conditions.

3. Filling of Butt and Tip. Ears with well filled butts, carrying out well on the tip (not necessarily clear over) show strength, vigor, breediness.

II. Trueness to Type, or Breed Characteristics
20 Points

1. Shape of Ear. The shape should conform to the variety type. It should be full in the central portion and hold its size well out to the tip. In general, circumference should be about three-fourths of the length.

2. Shape of Kernel The shape of kernel should conform to the variety type. The tips should be full, since a plump tip indicates strength, high proportion of corn to cob and high feeding value. The edges should touch well up to the crown, which necessitates a more or less wedge shaped kernel.

3. Purity of Color of Grain. In color the kernels should be free from mixture and true to the variety which they represent. No variation in shade of color as white, or golden yellow, white or creamy color must be allowed according to the variety's characteristics.

4. Purity of Color of Cob. Variation of color, a white cob in yellow corn or a red cob in white corn indicates impurity and should disqualify the ear, unless a variety type.

5. Uniformity in Size and Shape of Kernel. The size and shape of all kernels of each ear and of all kernels on all the ears in a sample should conform to the variety type and be uniform thruout the sample. This will insure more even stands.

6. Straightness of Rows. The rows of kernels should run straight from butt to tip and should not turn to right or left.

7. Filling of Tips. A tip well filled with uniform kernels indicates proper development of the ear and a relative high proportion of corn to cob. The kernels should keep their shape and size, well out towards the tip of the ear.

8. Filling of Butts. A butt well filled with uniform kernels indicates proper development of the ear and a relative high proportion of corn to cob.

III. Maturity and Market Condition
25 Points

1. Sappiness. Containing a high percentage of moisture.

2. Size of Ear. The size will vary with the climatic conditions. The usual length of ear in the northern sections of the state is from eight to nine and one-half inches. Measure the circumference about one-third the distance from the butt to the tip of the ear. The circumference has more to do with the maturing than does the length. Large ears showing signs of immaturity should be cut heavily. Ears a trifle long, having a circumference of such size that the ear matured, should not be cut seriously for length of ear nor for having circumference not in proportion to length.

3. Size of Cob. The cob may be too small. Ears with large cobs dry out slower, are later maturing, and shell less corn.

4. Depth of Kernel. As a general rule, deep kernels require more time in which to mature than shallow kernels. The depths will vary with the climatic conditions.

5. Starchiness. Generally a large amount of white starch indicates immaturity.

6. Plumpness of Tips. Shrunken tips indicate immaturity. They also indicate lack of vigor, low proportion of corn to cob, and low feeding value.

7. Chaffiness. Chaffiness indicates immaturity.

8. Adherence of Chaff to Tip Cap. If the chaff adheres to the tip cap in shelling, it indicates more or less immaturity.

9. Adherence of Tip Cap to Cob. The adherence of the tip cap to cob in shelling, leaving the black tip of the germ exposed, indicates immaturity.

IV. Vitality
(Germinating Power)
25 Points

1. Color and Condition of Germ and Embryo. The germ and embryo should be nearly white and should cut free and clean with a sharp knife. If the germ is soft, or cuts like salve, it indicates that it has not dried properly and if dark, that it has been frozen. These conditions should be noticed, in particular, in regard to the embryo.

2. Sappiness. Corn containing a high percentage of moisture after the 10th of October not only indicates immaturity but will be injured by cold weather.

3. Size of Germs. The germs should be large on the surface, and deep, showing strength and high feeding value.

4. Plumpness of tip. Plump tips indicate maturity, and giving room for large germ, show strength.

5. Chaffiness. Chaffiness, that is, looseness on the cob and thin, light kernels indicate immaturity and consequently lack of lessenedvigor.

7. Adherence of Chaff to Tip Cap. Chaff adhering to tip cap of kernels indicates lack of maturity and lessened vigor.

8. Adherence of Tip Cap to Cob. Tip caps adhering to the cob, leaving the black tips of the germs exposed, indicate immaturity—weakness.

V. Shelling Percentage
10 Points

1. Depth of Kernel. If the corn has matured, the deeper the kernel, the greater the proportion of corn to the cob and consequently the better the yield of shelled corn. The depth of the kernel should carry out well toward the tip.

2. Size of Cob. An extremely large cob means late maturity and low shelling percentage.

3. Filling of Butts and Tips. Other things being equal, ears with well filled butt and carrying their size well out on the tip will shell the highest pe4centage of corn to cob.

4. Furrows Between Rows. Other things being equal, the wider the furrow between rows, the lower proportion of corn to cob. However, enough space should be allowed to permit the corn to dry out readily. W de spac indicates a running out of the corn. Closeness of the crown, lack of furrow, usually indicates space at the cob and often immaturity.

5. Space at Cob. Space at the cob is a very definite indicat on of a low proportion of c rn to cob. This also indicated improper development or immaturity, poor vitality and low feeding value.

RICHLAND COUNTY FAIR

Corn Growing

Fifteen hundred ears of carefully cultivated, and very carefully selected yellow dent corn known as Minnesota No. 13 attractively displayed on a large pyramid in the center of the agricultural building at the Richland county fair effectually dispose of the fallacy that this is not a corn growing country.

The display was the marvel of all visitors. It was the outcome of the fifth annual school boys corn growing contest conducted in connection with the Richland county fair under the supervision of County Superintendent of Schools Barnes, to whom must be extended the credit for its amazing success.

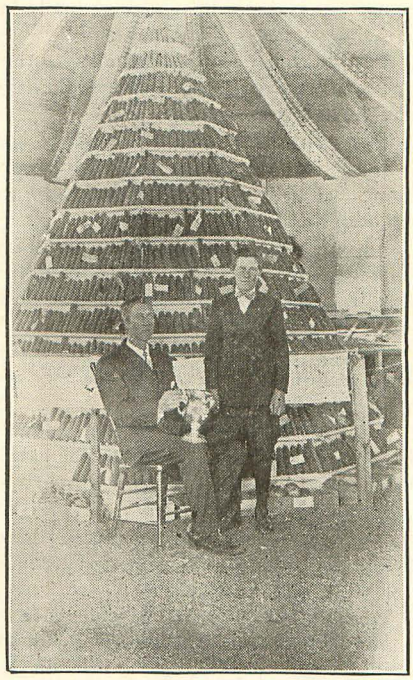
Five hundred and fifty entries were made by Richland county school boys. Of this number 148 are represented at the fair grounds in the display.

Butter Making

Anna Schmitt of Wahpeton, Bernett Hjalbjorhus of Walcott and Gertrude Bauer of Hankinson were the winners of the first, second and third prizes in the order named in the school girls' butter making contest conducted by the Richland county fair this year under the supervision of County Superintendent of Schools Barnes and his efficient assistants, Miss Emma Eckes and F M Hankins.

Over 300 girls were entered in the contest, and of this number 111 exhibits from 30 school districts made the scorers work overtime in the judging. This is the first contest of the kind ever held in the state and that it was deemed of importance is evidenced by the fact that Dairy Commissioner Flint of Bismarck detailed one of his deputies, E. A. Greenwood of Valley City, to come to Wahpeton and take charge of the work of judging the exhibits.

The exhibits made by the school girls alone, according to Mr. Greenwood, exceed in number the exhibits made at the state fair this year. The



Ascar and Oscar Tideman who won first and third prizes in the 1912 Richland County Corn Growing Contest for Boys

showing speaks highly for the daughters of Richland county farmers, and the interest thus strikingly shown augurs well for this great movement which has for its aim the creating of a more intelligent interest in dairying. The fruition of the idea will result in greater prosperity and greater happiness for the farm community and for the farmer and his whole family.

As in the boys' corn growing contest, the competition is primarily intended to implant in the minds of the young of the country districts the advantages of farm life, and early in life to indelibly impress upon them the fact that the reward of the husbandman is greater than that of almost any other avocation. Instead of a "back to the farm" movement, it is a "stay on the farm" proposition, and the success of previous years in the boys' contest and this year with the girls' shows conclusively that this is the proper method.

Livestock Department

FARM AND STOCK NOTES

N. J. Shepard

Sheep with good teeth fatten as well on shelled corn as ground grain.

A man makes fair wages at least half his time stopping ordinary farm leaks.

The productiveness and profitableness of the farmer's business depends almost entirely on intelligent management.

In commencing to feed sheep grain feed a small quantity at first and gradually increasing or they will lose wool.

Fill the churn but half full and see that the temperature is right if you would have the butter come readily.

Desirable points to cultivate in a hog may be greatly improved by breeding only from hogs in which these desirable points are well developed.

Activity and intelligence are necessary characteristics of a good farm horse and one that does not possess these natural qualities has no place on the farm.

There is no time in the year that sheep need grain more than at the time they are put on dry feed in the fall.

Meat of any kind must be from animals in the best condition or it will not be palatable, and especially is this true in mutton.

Many horses are ruined by being put to work too youug and worked too hard before their muscles are properly hardened and their joints sufficiently strong.

The stability of any industry depends to a great extent on its profitableness and its profitableness depends as a rule on its management by the men who are engaged in the business.

Milk may be rich in fats and the analysis may determine this, but the butter globules be unseparable by the churning process, from the milk but no test can determine this but the churn.

A well-bred animal will always show its blood in its fine glossy hair, and if any animal shows a departure from this rule it is either out of health or something is wrong with its breeding.

Do not keep a cow thru the winter that will not pay expenses, weed out all unprofitable animals and put in their places those that will yield a maximum quantity of the highest quality of product.

A good cow should not always be measured by the quantity of milk she gives, for some milk is much richer than others and generally the cow that gives the large quantity does not give the richest.

To give the pigs a good start in life the sow must be well fed both before and after farrowing. It is not necessary that she should be kept very fat, but she should be kept in good flesh, thrifty and vigorous.

In a well bred hog that is growing and feeding right there is no time when it will make more pork for the food consumed than from ten weeks to six months of age but this rule will vary somewhat with different animals.

Corn fodder that is cut up, husked in the field, then re-chocked and left to stand until some convenient time in the winter and is then hauled and fed loses a very material per cent of its original value before being fed.

WHAT'S WRONG WITH MUTTON MARKET?

Court A. Kleman

It is conceded by those in a position to know that there is something radically wrong with the market for dressed mutton. At this time there is considerable complaint from consumers with regard to the high cost of beef and pork. The neswpapers the country over are making the most of the situation Yet there is one class of meat that neither the consumers nor the newspapers have given the right attention during this time of high cost of living. That is sheep and lamb meats, which are selling at ridiculously low prices, relatively speaking.

Late last week Swift & Co., Chicago, quoted wholesale prime round dressed lambs at 11 to 11 ½ c per pound, against 25c per pound for N. 1 beef ribs, 27c for No. 1 loins and 12 ½ c for rounds. They quoted wholesale hand dressed sheep at 7 to 8c per pound and heavy dressed sheep at 6 to 6 ¾ c per pound. These prices were also in striking contrast with wholesale cost of hog products. Spare-ribs, which have very little meat on them, were quoted at 12c per pound, and trimmings, the cheapest class of pork that goes into sausage, at 8 to 9c per pound. The cheaper cuts of beef were quoted at 12 ½ c for rounds, 10 ½ c for chucks and 9c for plates.

If the newspapers of this country would give due publicity to the relative low cost of sheep and lamb meats, it would be a panacea for a great deal of complaint from the meat eaters. There is a woeful lack of knowledge in this country that mutton and lamb meats are as savory as beef and far more wholesome than pork. Properly prepared, they are the most nutritious meats that can be placed on the table.

An education campaign along this line could be carried on to great advantage by the newspapers, especially those in the big cities. The public would benefit greatly from a health as well as a monetary standpoint.

If the agricultural department at Washington and the state agricultural colleges were to take this subject up in the right

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Terms Reasonable LISBON, N. D. Write for dates

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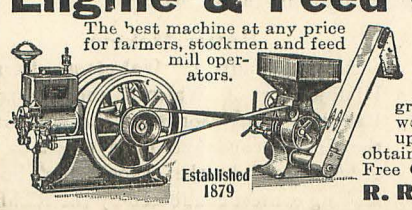

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R. R. HOWELL & CO., Minneapolis, Minn.

manner and educate the public how to buy and prepare the different cuts of sheep and lamb meats for the table, it would prove a great benefit to both producers and consumers. The fact of the matter is, the sheep industry of this country has been too long neglected by those in a position o put it on a better business plane. The time is at hand when the sheep breeders, the sheep feeders and range flock-masters should get together and see that their product is given the right kind of publicity and accorded co-operation from those in position to render this service.

SILAGE AND ITS FEEDING VALUE
By H. M. Cottrell in the Southwest Traill

Silage is a green, succulent, appetizing feed producing results, both in the cold winter and during the drought of summer, like choice pasture. It keeps animals in thrifty condition and gaining thru the winter with sleek coats. It keeps the system vigorous and the bowels loose and in normal condition like grass. It aids in the digestion of feeds given with it. Animals will give better returns for the grain fed when they have silage with it than when they have dry fodder.

SILAGE IS NOT A BALANCED RATION AND THE BEST RESULTS ARE NEVER OBTAINED WITH ANY KIND OF STOCK BY FEEDING IT ALONE. IT HAS AN EXCESS OF HEAT MAKING NUTRIMENT AND IS DEFICIENT IN FLESH AND BLOOD-MAKING MATERIAL. FOR THIS REASON IT GIVES BEST RETURNS WHEN GIVEN WITH FEEDS LIKE HAY MADE FROM ALFALFA, CLOVER, PEANUTS OR COWPEAS, OR WITH COTTONSEED OR LIN SEED MEAL.

In good pasture the flesh and blood making nutriment and the heat forming material are in the proportion of 1 of flesh making material to 4 ½ of heat making. In corn silage the proportion of 1 to 11, in timothy hay 1 to 16, in alfalfa hay 1 to 3 ½, in corn 1 to 10 and in cottonseed meal 1 to 1.1.

While silage is valuable feed and every stock grower should feed it, men with their first silos usually greatly overestimate its value. It varies in quality and so do other feeds, so that is it difficult to know its exact value. Prof. A. L. Hallker estimates that three tons of corn silage have a feeding value equal to one ton of clover hay and that three and a half tons are equal to one ton of alfalfa. Silage made from other crops is not valuable as that made from corn.

Beginners usually feed too much silage. I fed 1,600 tons a year for several years to dairy cattle that were being forced for a high yield. The largest milk yields, the most economical production and the best condition of the cows was secured by feeding 30 pounds of ensilage per cow per day, cows averaging 1,000 pounds each, live weight. Hay and grain were fed in addition. The cows would eat 40 to 50 pounds a day and occasionally there was a cow that would eat regularly 60 to 75 pounds of silage daily. It did not pay. Three pounds per cow per day for each 100 pounds live weight is a practical quantity.

Silage for Feeding in Summer

In almost every section of the United States there is a short summer drought when pastures fail and in some years the drought lasts for many weeks. Silage is the cheapest pasture during these summer droughts, be they short or long.

A few years ago there was a prolonged and severe midsummer drought in Eastern Kansas and most of the farmers had to sacrifice their cattle because there was nothing to feed them. One farmer, who had spent 20 years in breeding up a choice herd of beef cattle, was forced to sell his entire herd and ship it out of the state. He had to sell at the ordinary price of scrub stock and lost 20 years' time and work in breeding. In 60 days after the cattle were shipped out of the country there was abundant pasture from late rains. Silage would have saved this sacrifice.

Two years ago a drought in Minnesota cut off the pasture and dairymen were forced to feed hay in August. This cut short the supply of hay for winter and many good herds were reduced or sold out entirely. Silage would have saved this loss.

In 1911 an unusually severe drought occurred in early summer in Oklahoma, lasting 45 days. It became so bad that pastures furnished no feed whatever and thousands of farmers were forced to ship their stock to market and sell it for a very low price. At the end of 45 days heavy rains fell, the pastures were unusually good until a late frost and the forage crops made the heaviest yield ever known in the state. It will take three years to get the state well stocked with cattle again, and high prices will have to be paid for them. A small silo on each farm with the silage in it kept for summer feeding would have kept the cattle in good condition thru the drought and would have enabled the farmers to make good profits from the fall crops.

ST. PAUL UNION STOCKYARDS CO., SOUTH ST. PAUL, MINN.
Comparison of Receipts and Shipments of Live Stock for September, 1912

Receipts

Railroads	Cattle	Calves	Hogs	Sheep	Horses	Total Cars
C. R. I. & P.....	198	97	498	36	20	17
C. G. W.....	1213	229	2311	1303	3	92
C. M. & St. Pl.....	4978	568	4762	8630	.....	308
M. & St. L.....	1890	378	2854	1143	31	132
C., St. P., M. & O..	3871	725	7620	4371	256	310
C. B. & Q.....	305	55	666	913	38	32
M. St. P. & S. S. M.	13612	3046	4709	6336	3	620
Gt. Nor.....	20395	4360	8622	36349	94	1116
Nor. Pac.....	13494	2173	2288	41999	94	741
St. P. B. & T.....	.....	.....	.....	.....	.....	.....
Driven In.....	347	82	608	230	18	.....
Total.....	60303	11713	34938	101310	557	3368
Increase over 1911...	2745	1394	4184	.....	.....	145
Decrease.....	.....	.....	.....	871	386	.....
Jan. 1 to date.....	257750	102927	711314	312562	4750	21866
Increase over 1911.....		3674	79671	35913	.....	1516
Decrease.....	1530	.....	.....	.....	1876	.....
Average Wts.....	763	210	241	86	.....	.....

Shipments

C. R. I. & P.....	4209	102	.....	3011	9	144
C. G. W.....	5004	395	28	1193	19	170
C. M. & St. P.....	12101	740	3879	20315	101	553
M. & St. L.....	2468	34	.....	1213	.....	81
C., St. P., M. & O..	9387	986	5641	12274	58	429
C. B. & Q.....	8405	248	99	25005	68	418
M. St. P. & S. S. M.	1638	95	.....	8295	44	110
Gt. Nor.....	287	5	.....	804	124	20
Nor. Pac.....	571	1	.....	395	30	20
St. P. B. & T.....	.....	.....	.....	.....	.....	.....
Driven Out.....	394	130	54	49	30	.....
Total.....	44464	2736	9701	72544	483	1945
Increase over 1911...	2414	303	3114	.....	.....	120
Decrease.....	.....	.....	.....	10861	413	.....
Jan. 1 to date.....	167356	17249	167290	200627	4608	81171
Increase.....	.....	.....	.....	19353	.....	.....
Decrease.....	7660	11563	6534	.....	1961	406

Silage for Beef

So much of the range country has been cut up into small farms that never again will the ranges furnish an adequate supply of beef for this country. The supply of choice beef in the future will come from the small farms and will involve a radical change in farm management.

The beef will be "baby beef," the cattle marketed at the age of 18 to 24 months. They will be grown and fattened largely on silage and alfalfa, clover or similar legume hay, with a small daily ration of grain from the time they are four months old. The pastures will be stocked to the full limit when flush and as the season advances the grass will be supplemented with silage. Well bred cattle of strong beef type of the quick maturing sort can be raised and fattened for market under this system at a profit on land costing $150 to $200 an acre and the fertility of the land will steadily increase.

The use of the silo will increase the cattle carrying capacity of the farms in the corn belt at least 50 per cent and in many cases will double it.

The silo can make the South a great beef producing country, with the meat produced at a low cost. Take Arkansas, for example; there are a thousand sawmills at work in that state, using annually the trees from many hundreds of thousands of acres. Most of the mills leave standing trees of less than eight inches in diameter and all the brush. As soon as the brush is cleared out native grasses come in that furnish good pasture for a long season. The fall trees furnish shade, making ideal conditions for fattening animals while on grass.

In the land free from trees Bermuda grass thrives, and we have authentic records of several Bermuda pastures in Arkansas that carry regularly four head of cattle per acre thru the long summer season.

There are seven months between frosts in Central Arkansas and this makes a season long enough to fully develop the heaviest yielding silage corn. Arkansas is the home of cotton, and cottonseed meal can be purchased at first hand with no expense for freight. Spanish peanuts as a second crop are a sure crop and the tops and nuts cured as hay make a feed with 18 per cent of protein and 21 per cent of fat, the richest hay in the world. The cutover timber pasture is cheap ($5 to $15 an acre) and the combination of cheap pasture, long pasture season, mild and short winters, with peanut hay and cheap cottonseed meal to feed with silage, is ideal for the cheap production, in enormous quantities, of beef of high quality. Eastern Texas, Louisiana and other southern states have similar advantages. What these sections need is expert cattle men.

The value of silage for beef production is shown by an experiment made in fattening steers at the Kansas Experiment station. Thirty steers were fattened, part being fed grain and alfalfa hay and the others grain, alfalfa hay and corn silage. The steers having silage gained in eight months 446 pounds per steer, while those without silage gained 418 pounds per head. A ton of silage saved 78 pounds of grain and 677 pounds of alfalfa. The grain was a mixture of equal parts ground corn and Kafir. The silage fed steers sold in Kansas City for 25 cents per hundred live weight above the price paid for the steers fattened without silage. Armour & Company reported that the carcasses of the silage fed steers had the largest amount of fat and were just right for the trade. In this test three tons of corn silage had a feeding value equal to one ton of alfalfa hay.

In fattening beef cattle, not over five pounds of silage per head should be used the first day, and the amount should be gradually increased until, at the end of ten days to two weeks, 30 pounds per head are fed daily. This quantity of silage can be fed until the steers get in good flesh. Then, for the finish, the amount should be slowly reduced until only ten to twelve pounds per steer should be given daily. The skillful feeder who watches his steers will know when to make the changes. Watch the droppings all the time, and when the bowels show the first indication of becoming too loose, cut down the silage and give dry straw for a feed or two.

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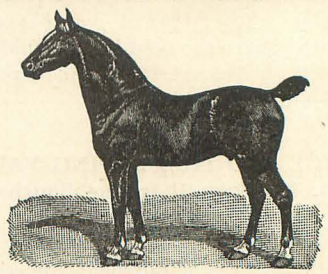
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ST. PAUL UNION STOCKYARDS CO., SOUTH ST. PAUL, MINN.

Comparison of the Origin and Disposition of Live Stock for September, 1912

Origin of Live Stock Received

States	Cattle	Calves	Hogs	Sheep	Horses	Total Cars
Minnesota	32424	9166	27613	19458	94	1771
Wisconsin	4683	1149	4945	5450	27	289
Iowa	.....	.....	174	.....	71	7
Far South	.....	.....	.....	.....	175	9
So. Dakota	3452	212	600	542	21	140
N. Dakota	1 2411	920	1606	5771	5	536
Montana	6941	266	.....	69589	89	593
Far West	.....	.....	.....	.....	75	T2
Manitoba & N.W.T.	338	.....	.....	.....	.....	17
Far East	.....	.....	.....	.....	.....	.....
Returned	54	.....	.....	500	.....	4
Totals	60303	11713	34938	101310	557	3368

Disposition of Live Stock

S. St. Paul P'k'rs	14836	7297	25157	22609	.....	.....
City & State Butch	702	297	2342	232	2	61
Outside Packers	1331	1164	7359	3334	.....	144
Minnesota	5385	309	.....	5676	153	206
Wiscon	1713	64	.....	1074	127	75
Iowa	13473	212	.....	7091	37	428
Nebraska	.....	.....	.....	146	.....	1
Kansas & Missouri.	84	.....	.....	.....	.....	2
So. Dakota	2570	281	.....	.....	.....	69
No. Dakota	403	1	.....	1366	19	20
Montana & West	247	4	.....	.....	.....	5
Far South	.....	.....	.....	.....	.....	.....
Manitoba & N.W.T.	.....	.....	.....	.....	71	3
Mich. & E. Can	21	2	.....	.....	.....	1
Chicago	12347	310	.....	53007	.....	724
Ills (ex Chicago)	4949	92	.....	130	.....	165
Eastern Points	1185	.....	.....	.....	74	37
Returned	54	.....	.....	498	.....	4
Totals	44464	2736	9701	72554	483	1945

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POLAND CHINA PIGS, also Shropshire sheep. Seed grain. GEO. N. SMITH, Amenia, N. D.

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Envilla Stock Farm, Cogswell, N. D. will quote you special prices on Angus Cattle, Shetland Ponies, Duroc Jersey Hogs, Wolf and Fox Hounds, Pure Bred Poultry, Pet Stock. Write them.

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A Few Choice Ones
FOR SALE

Willobank Farm

EASTGATE BROS. LARIMORE. N. D.

Poultry Department

HINTS TO POULTRY KEEPERS ON CARE AND MANAGEMENT

By J. H. Shepperd and D. W. Dynes

Inducing Exercise in Winter. Exercise is needful for the laying fowl and measures should be adopted by the poultry keeper to insure a reasonable degree of activity among the flock. With hens having free range no difficulty will be experienced on that score, but with fowls in close summer and winter confinement exercise is an important factor in good egg production. The usual method followed to insure the fowls taking sufficient exercise in winter quarters is to compel them to scratch and hunt for their grain foods in a litter of short-cut straw, leaves or hay. Hay is the least desirable of the materials mentioned as it has a tendency to pack too closely. The litter, which covers the whole floor of the pen or house, should range in depth between three and six inches. The exercise obtained from the daily use of a good dust bath also tends to keep the fowls in good physical condition.

Animal Food. A daily ration for hens is not complete without the addition of some form of animal food. This may be supplied in various ways. Green cut bone can be secured at most butcher shops and when cut fine with a bone machine makes a valuable food for poultry. The greatest objection to the use of this commodity lies in the fact that it easily spoils, and tainted meat or bone is likely to cause bad effects especially among young stock. Cooked meat scraps from the table can be used to good advantage. Skim milk, fed separately or with the mash, furnishes a partial substitute for the meat ration. One of the most satisfactory meat foods for poultry is the commercial by-product, dried beef scraps. Concentrated meat foods of this sort can be kept indefinitely, and the poultryman can usually place reliance on the chemical composition of the product. Dried beef scraps can be bought in large bags ready for use from any poultry supply house.

Importance of Grit. Grit takes the place of teeth in fowls and a liberal supply should be available to them at all times. The grit may be in the form of crushed rock, oyster shell, coarse sand, broken glass, etc. Fowls having free summer range will usually pick up sufficient for their needs on any ordinary soil. Soils that are deficient in small pebbles and coarse sand particles may not furnish enough of the needed materials for the flock. Lime is essential for forming the egg shell and this is best furnished by giving the birds constant access to ground oyster shell. The health of the growing chick is dependent on a plentiful supply of good grit. Both the oyster shell and crushed rock are commercial products and may easily be procured on the market.

Dustbaths. The value of a good dustbath has been mentioned in the discussion of preventives against lice. Fowls do not thrive at their best without it. Fine road dust makes the best material for a dustbath. This can be secured during the fall or summer and stored away for winter use. Dust from heavy clay soils has a tendency to pack if it gets slightly damp. Mixing ashes with the dust will help correct this difficulty, altho ashes are objectionable to a certain degree, as they have a tendency to bleach the legs of the fowls and make the feathers harsh and dry. A dusting box eight inches high and two feet square will be sufficiently large for a pen of twenty fowls. Frequent additions or renewals of dust will be necessary according as the materials are wasted or fouled by the hens.

Marking Hens. It is usually mere guess work to tell the age of a hen by her appearance after she has passed the pullet stage. To the good poultryman it is important that the exact age of every fowl is known. Hens past the age of profit can

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thus be culled out and their places taken by younger stock. Legbands with numbers may be used when the pullets arrive at maturity, and, if records are kept, the identity of each fowl can always be established. Another method which should be followed by every poultrykeeper is to punch a hole in one of the four webs of the feet, each web representing a certain year Special punches for this purpose may be purchased from any poultry supply house, but a small sized leather belt punch can be used to good advantage. The hole is punched very easily when the newly hatched chick is first taken from the nest or incubator. All of one season's chicks may be marked on the same web, altho if special matings are to be kept separately, as high as fifteen combinations can be used. If properly done the hole or traces of the scar will always remain and identity of the fowl can scarcely be lost.

Lice and Mites

The two most common parasites of fowls are the common hen louse and the red mite. These pests appear to be as universal in their distribution as the domestic fowl itself, and cause untold damage, yearly, to the poultry, industry. Lice feed on the feathers and possibly on the dead cuticle of the birds, while the mites gnaw the flesh and suck the blood. If lice are present in much numbers on fowls, they will readily be seen in the feathers under the wings, or about the vent. Mites do not ordinarily remain on the fowls during the day but secret themselves about the roosts and in the crevices of the pen or house. At night they come forth from their hiding places and attack the birds. The lice vary greatly in size, ranging according to Dr. Salmon, from one thirtieth to one sixth of an inch in length. Mites are much smaller and appear as minute bodies about one-fortieth of an inch in length. If present in large numbers they congregate in clusters under and at the ends of the roosts. When mites are filled with blood they are easily recognized by their dark red color; otherwise they may appear white or of a yellowish cast. A good indication of the presence of mites in the poultryhouse is their excrement, small grayish patches, like fly specks, appearing on the roosts.

Method of Destroying Lice and Mites. Under ordinary circumstances no special measure need be taken for exterminating hen lice. If lice are abundant in a flock of poultry either one or perhaps all of three conditions are present: the stock is lacking in health and vigor and will be more or less debilitated; the house is ill-ventilated, poorly lighted and unsanitary; and the fowls do not have access to good dust baths. A healthy hen if given a fair chance will keep free from lice. In well ordered flocks, however, an occasional fowl is found which appears sickly and out of condition. Such fowls readily become the prey of lice and should receive assistance in getting rid of the parasites. Some good insect powder, well dusted into the feathers, will prove a very efficient remedy. Setting hens and hens with their broods should also receive like treatment. Head lice on chicks may be killed by a single application of pure lard or butter. Some poultry keepers make a practice of immersing their fowls bodily in a one per cent solution of carbolic acid. Such treatment altho effective is too laborious and is unnecessary unless in extreme cases.

Mites are very difficult to exterminate and their treatment must be of a rigorous nature. When the house is badly infected, all fixtures in the pens, such as roosts, dropping boards, nests, etc., should be removed, and the inside walls, floor, ceiling, and also the fixtures themselves, thoroly wetted by spraying on a solution made by dissolving 6 ounces of crude carbolic acid to each gallon of hot water. If a spray pump cannot be procured the solution may be applied with a house broom. This treatment can be followed up a few days later by the application of a good coat of whitewash. Any mites that have escaped the first treatment should be effectually killed by the whitewash.

Preventive Measures. The best preventives for lice and mites are cleanliness, well-lighted pens, and efficient dust baths. To secure a fair degree of cleanliness the droppings should not be allowed to remain in the pens very long. If dropping boards are used a daily removal is preferable. The scratching litter should be renewed when it shows indications of becoming foul.

A coat of whitewash applied yearly to the inner woodwork of the poultryhouse is one of the best preventives as well as destructive agents for lice and mites that can be used. Kerosene is also an invaluable remedy, and if used on the roosts and dropping boards several times a year, will be found very useful in checking the inroads of these parasites. Many of the standard insecticides on the market are economical and very effective for this purpose.

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I can sell you last year's hen and cock or this year's pullets and cockerels. Prices, $1.00 to $2.50 each. You must order early. I have 250 to pick from.
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EGGS FOR HATCHING. White Plymouth Rocks (Fishels Strain) $5 per 15. I have the Best in the Northwest. No exceptions. Indian Runner Ducks from Choice High Bred Stock, $2.50 per 11. Canadian Wild Geese, $1 per egg.
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WHITE WYANDOTTES. If you want eggs from an early maturing, heavy laying, prize winning strain of White Wyandottes write me. I am developing a special laying strain by use of the trap nest. Prices reasonable. Write
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Rose Comb Black Minorcas
Eggs for sale, $2 for 15 eggs.
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SINGLE COMB BUFF ORPINGTON EGGS
$1.00 per 15 or $5.50 per 100 from my thoroughbred farm range flock. $2.00 per 15 from my prize winning pen. Mrs. D. W. Swanson, New Rockford, N. D.

School and Home

WORK TOGETHER

"I will not work with Mr. Pen,"
Said Mr. Ink, one day;
"Nor I with you," said Mr. Pen,
And so each went his way.

Said Mr. Pen, "Today, I think,
A letter I will write,"
Alas! he could not make a mark
Upon the paper, white.

Said Mr. Ink, "I think I'll write
A story, now, why not?"
But, tho he worked both long and hard
He only made a blot.

Then Mr. Pen and Mr Ink,
Said, "We have foolish been;
Hereafter, we'll together work,
Right now, we will begin."

Now we can all a lesson learn,
From this short tale, I guess,
For "work together," is the rule,
If we would have success.

So many of our country mothers are bemoaning the fact that their children lack the educational advantages of their town cousins, without looking for a remedy.

There is little, indeed, in the drowsy, small schoolroom to arouse enthusiasn in either pupils or teacher. Usually the new teacher is young and inexperienced, her greatest asset being her desire to make a success of her new work. She finds a box of a schoolhouse scorched by the rays of a summer sun, or penetrated by draughts of winter cold. Not infrequently she must build her own fires in the cranky old sheet iron stove, and sweep the dusty schoolroom. To a girl accustomed to modern school buildings and janitors, this condition of affairs is astounding, and has a dampening effect upon her ardor. She finds it difficult, too, to arouse the children to their best endeavor when competition is almost impossible. And when weeks pass without a word or sign of interest or encouragement from the parents, is it any wonder that the little teacher grows listless and droning and anxious for school to close?

But surely the country mother, with her multitudinous duties, cannot be held responsible for this? I only wish mothers realized more fully their wonderful influence and capability!

Dear sisters, whose hearts are yearning over the welfare of your children, I have been first a country teacher, and then a country woman, and I know whereof I speak. You cannot build an imposing schoolhouse, you cannot afford to hire a janitor, but you **can** make your school as much a success as the average town school.

When the new teacher comes into your midst—or perchance it will be the old one—call upon her at once; do not let work, or pleasure, or diffidence keep you away. Then invite her to your home by a genuine specified invitation—no matter if your home is but simple and poor. Occasionally you will find a girl who will emphasize her supposed superiority over you, but the average country teacher is very human, and not infrequently very lonely and homesick! Once the ice is broken, entertaining the teacher will cease to be a dread, and you will derive genuine pleasure in occasionally inviting her to your home or including her in some of your pleasures.

When the school is thoroly organized, visit it some afternoon and walk home with the children. Watch how the teacher conducts her classes—this knowledge will help you vastly when the children ask you questions regarding their lessons. Examine the children's work and let them see you are interested. Observe the room critically and talk with the teacher about the improvements she is so much desiring. See if the new blackboard she has asked for is not really a necessity after all. Surely a couple of hours spent each month in this way is a small matter compared to our children's education, yet four such visits each term from every mother in the district would revolutionize the school.

How can this be? The pupils are no longer mere automatons to this new teacher, but real children whose parents are vitally interested in their welfare. The parents are real friends to whom she

may go with her difficulties and her aspirations. School suddenly becomes an important thing to the children because mother is interested and is liable to come at any time to witness the progress.

And mark you, this costs nothing but a very little time and interest. It costs nothing to help the little teacher plant trees and shrubs on the unattractive grounds. It costs nothing to make the children believe they have a good school and a good teacher—even tho you may not wholly believe this yourself—for many minds of this opinion will usually bring it to pass. Teach the children that it is a privilege to help keep the schoolhouse and grounds in order, that the absence of a janitor may not be felt.

You will find this benefits yourself, also. Some of the wheels of your mental mechanism not in frequent use will begin to turn again; you will be interested in new books and methods, in educational journals, and mothers' magazines. Many dissatisfactions arising from misunderstandings regarding the school management will be removed, and you will be closer to your children in this added interest.

Conditions will not be ideal, to be sure, but they are seldom that in the town schools, and it is possible to do excellent grade work in the little schools of the country.—The Farmer's Wife.

DISH WASHING

Mrs. Gordon W. Randlett

Necessary utensils for dishwashing consist of dishpan, draining pan, dish cloth, clean dry dish towels, boiling water and soap.

Before clearing the dining table, prepare a place in the kitchen for the soiled dishes. All pots and pans should have been put to soak as soon as the contents were emptied. These should be scraped and piled and placed by themselves ready for washing.

Gather up the soiled dishes in a methodical manner; glasses by themselves, then silverware; cups, saucers and plates uniform in size in separate piles, scraping the bits of food and grease from the dishes before putting them in the dish water.

Fill the dishpan half full of hot soapy dish water. Have the draining pan at the left of the dish pan. Wash the glasses first, rinse, dry and set aside. Use soft towels for wiping, and see that the glass ware is shining when put away. Wash, rinse and dry the silver in the same way. Be sure to use perfectly dry towels for the silver. Next the smaller pieces of china, then the larger pieces are washed and placed in the draining pan Pour hot water over these and a little polishing with a dry towel will be all that is necessary.

Wash pots and pans and scald well before wiping. If steel knives are used they should be scoured.

Put away all dishes.

Empty the dish pan, put the rinsing water in it and use to scrub and clean table and sink. Wash, scald and dry the tea and coffee pot after each meal.

Usually after the midday meal the dish cloth should be washed in good soapy water, wrung out dry and hung to dry in the sunlight and fresh air if possible.

Clean the stove and teakettles. Wipe the teakettle off after each meal and very frequently wash it inside.

Empty the garbage pail and clean pail with the remaining suds.

The dish water should be kept hot and soapy enough to prevent a ring of grease on the pan. If the rinsing water is good and hot fewer towels will be needed.

VENTILATION

W. C. Palmer, A. C., N. D.

Why ventilate? Why bring fresh air into a house or barn? One cannot stop breathing for even five minutes—we are so dependent on the oxygen that the lungs can take out of the air. If no fresh air is allowed to enter a room occupied by several people the air soon becomes foul from the air coming from the lungs. Often when one enteres a room it will feel close. In that case ventilation is necessary. Breathing air over and over lowers one's vitality, which results in taking colds easily and along with the cold other troubles often start. Pure air is fully as important as pure food.

A Full Value Blue Serge Suit for 17.50

That will give you satisfaction in style, fit and workmanship as well as in quality. Send in your breast, waist, seat, inside trouser, and sleeve length from center of back to hand, or send for measure blank.

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Forty acres under plow. A never-dry river runs across corner. County Road runs diagonally thru land. Irrigation ditch north of land, if you care to use it. Five miles to railroad. One of the finest apple orchards in world near mouth of valley. 400 acres plowed. Fine for grain, flax, etc. 225 acres grazing land. May divide if desirable.

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That is the way some one has described our booklet "Handy Book on Painting," which we send to any farmer requesting it.

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and pure linseed oil make the most serviceable paint you can buy for any use. This book tells just how to mix and apply them. Tells how to determine the quantity of paint you will need for your house, the number of coats to apply and how to get the colors you want, etc. You hire a good painter for important jobs, but every house owner should know these paint facts for himself. It is knowledge that will mean money in your pocket and a better job of painting.

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Ask for Farm Painting Helps No. 345

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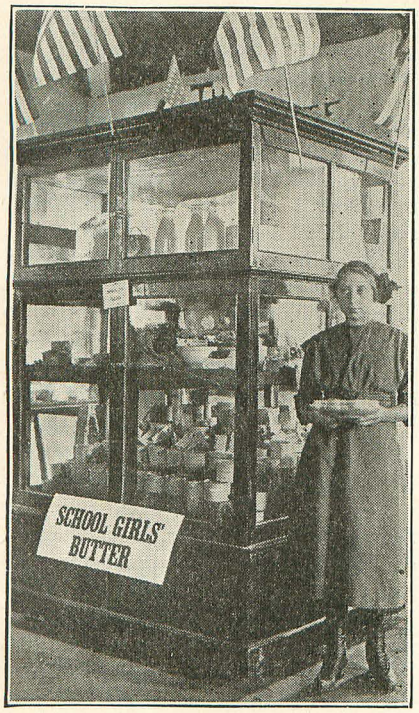

Anna Schmitt, Winner in Girls' Butter Contest, Richland County.

$100 APPLE PREMIUM PUT UP AT LAND SHOW

Howard Elliott's Offer Supplemented With Second Prize by Management

Howard Elliott, President of the Northern Pacific Railway, has offered $100 in gold for the best ten boxes of apples grown in the American Northwest this year and exhibited at the Northwestern Products Exposition in Minneapolis, November 12-23 inclusive. Mr. Elliott also authorized a number of other prizes, to be announced later. These ten box samples are to be brought to Minneapolis with the displays of other products from the seven northwestern states and competent judges will pass upon them giving credits for variety. This was not done at the New York Land Show last year, but this year variety will score, tho the offer is open for any kind of an apple.

The exposition management will pay $50 in gold or give a solid silver trophy cup for the second best ten boxes and guarantee to sell the first twenty-five samples at a minimum of $2.50 a box and remit the amount to the exhibitor.

This is said to be the best offer ever made to induce apple growers to send in their ten box samples. They stand a chance of winning the $100 in gold or the $50 prize. If they are among the twenty-five highest scoring exhibitors they are sure to win or get for the apples $25 of real money.

When the exposition is over it is planned to have a seed wheat and an apple auction which will supply a considerable number of farmers with choice seed wheat and city people with five and ten box lots of good apples. The Bitter Root valley, the valleys of the Yakima, the Walla Walla country, the Methow valley and the Wenatchee district have promised a number of exhibits for Mr. Elliott's prize.

Besides the above prizes he now offers, as additional and supplementary prizes, two trophy cups to be awarded at the same exposition.

One cup will be given for the best bushel of Dent corn, and the other for the best samples of forage plants grown this year in any of the six states—Minnesota, North Dakota, Montana, Idaho, Washington and Oregon—traversed by the Northern Pacific Railway and taking part in the 1912 Exposition. The Northern Pacific is to become the possessor of the prize winning exhibits.

Mr. Elliott declares that the possibilities of corn raising in the Northwest have not as yet been touched by the farmers. Great triumphs are in store for those who will persistently and scientifically engage in this work and assist in extending the corn belt northward, and it is to encourage proper efforts in this line that Mr. Elliott has offered these trophies for the prize winning exhibits at the Northwestern Products Exposition.

Here is an opportunity that ought not be neglected to show to the world that the Northwest is right in it when forage plants and corn are subjects for discussion.

A report comes from Hawaii of the discovery that the ordinary black volcanic sand or lava cinder, millions of tons of which are deposited near the extinct craters in the Sandwich Islands, contains from 2 to 7 per cent potash. The potash is not in a readily soluble form and disintegrates slowly, but the sand itself will serve to loosen and lighten the heavy soil of the sugar fields and possibly will stimulate plant growth. If it is found that the plants will take up the potash in the volcanic sand, the pineapple growers as well as the sugar planters will save a large amount of money as the sand may be obtained in unlimited quantities and is available at slight cost for cartage.

One pint of cleaning fluid, prepaid for a **dime.** The only fluid that will not explode. **A. T. BURGER, 790 E., 181 St. N. Y. City. Agents Wanted.**

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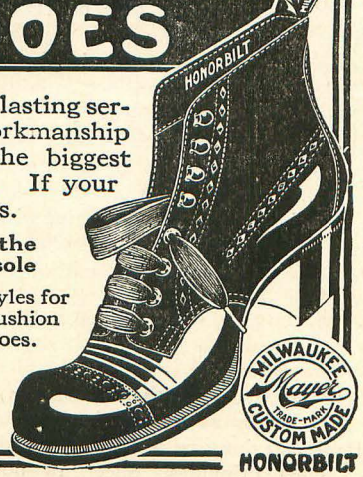

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WARNING—Be sure and look for the Mayer name and trade mark on the sole

We make Mayer Honorbilt Shoes in all styles for men, women and children; Drysox, Yerma Cushion Shoes, and Martha Washington Comfort Shoes.

FREE—Send name of dealer who does not handle Mayer Honorbilt Shoes and we will send you free, postpaid, a handsome picture, size 15x20, of George or Martha Washington.

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Seasonable Receipts

NORTH DAKOTA POTATOES

North Dakota potatoes have quality. They command a premium on the market both for seed and table use. To bring out the quality in the potato it needs to be cooked right. The following receipes by Mrs. W. C. Palmer are recommended:

To obtain the highest food value in potatoes they should be either boiled or baked in their skins. When potatoes are pared before cooking the least loss is sustained by putting them directly into the boiling water. Do not allow pared potatoes to stand in cold water before boiling, as it has been found that this results in a loss of nutrients. It takes from 20 to 30 minutes to boil potatoes and about an hour to bake medium-sized ones. To tell when potatoes are cooked, try with a fork. When the fork passes thru the potato easily it is done. The kettle in which the potatoes are cooked should not be used for anything else if one wishes the potatoes to be as white as possible.

Plain Boiled Potatoes in the Skin

Select potatoes of medium size, wash clean by using a vegetable brush, rinse in clear water and cook in boiling salted water, sufficient to cover. When done, drain and remove cover, shake kettle a few times, and the potatoes are ready to serve. Treat potatoes that are to be boiled pared in the same way, only remove skins in thin parings.

Baked Potatoes

Select potatoes with smooth skins, medium size, scrub well, put to bake on the bottom of a clean, moderately hot oven. When done pierce in center to allow the steam to escape. Baked potatoes should be served at once. They become soggy if allowed to stand.

Stuffed Potatoes

Select and wash as for baked potatoes. Bake. When done take out two at a time. Cut a small opening the size of a teaspoon, scrape out the inside into a mixing bowl, using care not to injure the skins. After all the insides of the potatoes have been removed, mash, add butter, hot sweet milk as for mash potatoes, salt and pepper. Beat together, put back into skins, brush top of opening with butter; set away until 20 minutes before time to serve. Place in oven and when they puff up and are hot clear thru they are ready to serve. Do not allow to stand long before serving.

French Fried

Wash, pare and remove imperfect parts. Have a frying pan ready with hot butter or meat drippings. Slice raw potatoes very thin in the pan until the proper amount is cut up. Season with salt and pepper. Cover, allow to cook one-half to three quarters of an hour on a slow fire, stirring often to prevent burning.

Mashed Potatoes

Select and prepare as for boiling potatoes without skins. When done, drain, shake kettle a few times. Mash fine, add salt and enough heated sweet milk to slightly moisten the potatoes. Then whip with a large spoon until light and creamy white. Serve with a lump of butter in the center of potatoes.

Scalloped Potatoes

Select and prepare as for boiling, then dice them. Put layer of bread or cracker crumbs in the bottom of a well buttered baking dish, then a layer of diced potatoes and so on until the dish is as full as wanted; the last layer being of the crumbs rolled in melted butter in order to have them brown nicely. Season each layer of potatoes with salt, pepper and small lumps of butter. Cover with milk and bake one hour. Serve in dish.

It might be a good plan for potato growers when shipping potatoes in sacks to enclose a set of these recipes in each sack. Hotel keepers and house keepers could pin these up in the kitchen and then if new and inexperienced help had to be depended upon, they would be urged to follow one of the recipes.

Let all North Dakotans join in the campaign to boost the fine quality of our potatoes.

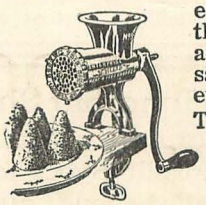
Mrs. Bryan's Oatmeal Cookies

Two cupfuls Quaker oats, 3 cupfuls flour, good cupful butter, 1 cupful sugar, one-half cupful quite warm water, one-half teaspoonful soda dissolved in water. Mix oats, flour and sugar together; then work in butter well, and add water. Roll thin and bake quickly.

More Money in Making Sausage than in Selling Hogs on the Hoof —Use Enterprise Machines

Market conditions for farm-made pork products were never better than right now. Don't lose several dollars per hog by selling them alive. Cut them up yourself. Use an **Enterprise Meat AND Food Chopper**—and a combination **Enterprise Sausage Stuffer and Lard Press** and realize the most money out of your hogs.

The ENTERPRISE Meat AND Food Chopper



enables you to make the sweetest, juiciest and most nourishing sausage meat you ever produced.

The big use for a chopper is to cut meat, less frequently to cut other food. But both are important. Therefore, be sure you get a *Meat AND Food Chopper.* It's useful not only at hog-killing time —but always useful in the kitchen. The exquisite dishes you can prepare from left-overs and bits of food that otherwise would be wasted are a source of delight to the family that lives well. It also contributes so much to economy in furnishing the table that it is really indispensable. It repays its cost almost every week in the farm home.

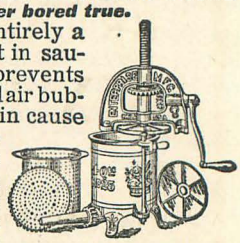
There are lots of choppers that cut meat by crushing and mangling it, but only one that really cuts—the **ENTERPRISE Meat AND Food Chopper.** Has four-bladed knife—four *cuts* at every turn of the handle.

"ENTERPRISE" Meat AND Food Choppers are made in 45 sizes and styles for hand, steam and electric power. We also make *cheaper* food choppers, but recommend the above.

No. 5.	**Family size . . .**	**$1.75**
No. 12.	**Farmers' size . . .**	**2.25**
No. 22.	**Farmers' size . . .**	**4.00**

The ENTERPRISE Sausage Stuffer and Lard Press

Cylinder bored true.



No. 25, 4-Quart, Japanned
Price, $5.50
Tinned and Japanned

makes failure entirely a thing of the past in sausage making. It prevents air bubbles—and air bubbles are the main cause of sausage spoilage. To have good sausage *always*—keep out the air. It can be done surely and easily *only* by using an **Enterprise Sausage Stuffer** with the patented corrugated spout. Other machines offer corrugated spouts—but such corrugations are more for looks than for any practical purpose, for the corrugated spout of the **ENTERPRISE** is *patented* and cannot be used or imitated by any other machine. It can be had only with the **Enterprise Sausage Stuffer and Lard and Fruit Press**—three machines in one. The change to either use is instantly made. They can be had in 9 sizes and styles—up to eight-quart capacity. All are accurately machined. Plate fits closely without binding. Meat does not squeeze out. These presses are an absolute necessity at butchering time. Illustrated catalogue on request.

"The Enterprising Housekeeper," 200-Recipe Cook Book, sent for postage, 4c.
Enterprise specialties are for sale at hardware and general stores everywhere.

THE ENTERPRISE MFG. CO. OF PENNA.
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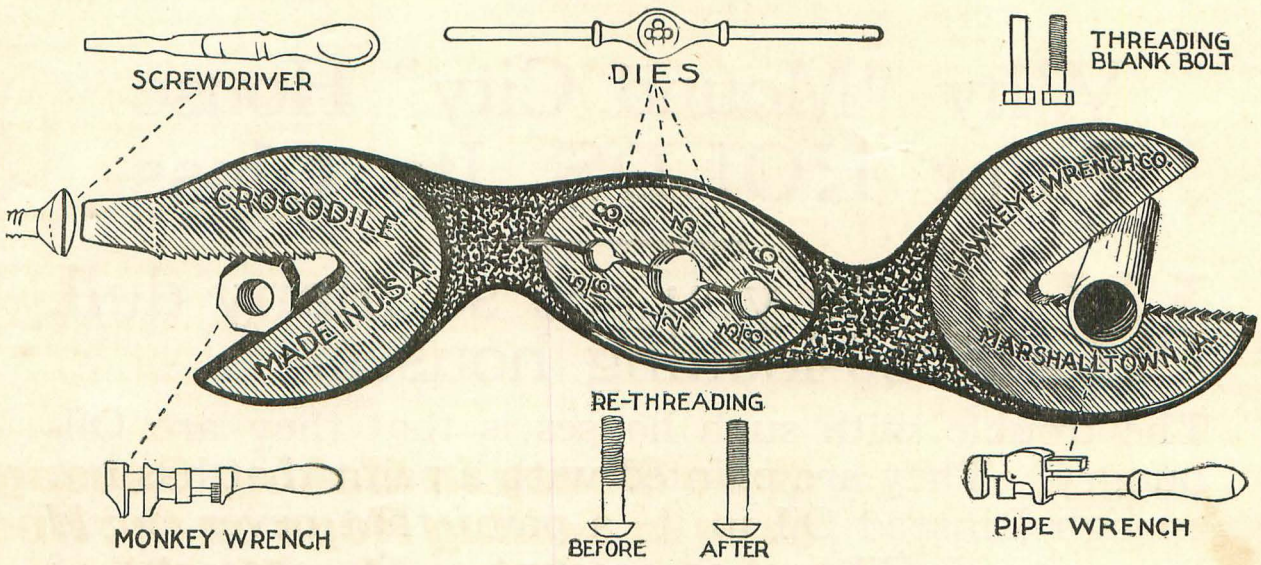
The "CROCODILE" Wrench - - FREE



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SIX HANDY FARM TOOLS IN ONE

A pipe wrench, a nut wrench, a screw driver, and three dies for cleaning up and rethreading rusted and battered threads. Dies fit all standard bolts used on standard farm machinery.

Requires no ajdustments; never slips; simple and always ready.

Will work in closer quarters than any other wrench.

Has handsome, blue finish.

Every farmer should carry one of these handy little wrenches on his farm machinery. They are light, strong, compact, and easily carried in hip pocket.

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MOUND CITY
HORSE SHOE BRAND
TRADE MARK
PAINTS & VARNISHES
PRESERVE & BEAUTIFY

Why "Mound City" House Paint HOLDS Its Gloss

WHY do you see so many dull, faded-looking houses?

The trouble with such houses is that they are Oil-hungry. They are painted with a paint that has not enough Linseed Oil in it—a paint that never *could* have enough Oil in it on account of the character of the pigments used.

The best Paint *must* do two things. It must preserve and beautify. Do you know that Linseed Oil is *the* great preservative in Paint and that if it were not for the sake of appearance, you could give your house a coat of pure Linseed Oil, and it would be protected?

The solid part of Paint (Strictly Pure White Lead, Strictly Pure Zinc, and, in some Paints, baser metals) acts as beautifier only.

Strictly Pure Zinc absorbs more Oil than any other pigment and that is the reason for its use in Horse Shoe Paint. WHITE LEAD is used for its covering qualities, and ZINC for its *Oil-carrying* capacity.

And Oil-carrying capacity is what your Paint *must have* if your property is to be protected.

Horse Shoe Paint, while it covers and beautifies the surface thoroughly, is made of pigments that carry so much oil, that the *first* coat satisfies the oil-hunger of the wood leaving the second coat to gloss, harden, protect, and beautify.

That's why Mound City Horse Shoe Brand House Paint HOLDS its gloss.

Mound City Paint & Color Co.

GOOD MAKERS OF GOOD PAINTS

St. Louis, U. S. A.

NORRIS B. GREGG, President WM. H. GREGG, Jr., Vice-President E. H. DYER, Secretary